REMARKS

Claims 1-17 are pending in this application. Claims 1-17 are rejected. Claims 1-4, 8-11 and 16-17 are rejected under 35 USC §103(a).

Independent claims 1, 5, 8, 13, 16 and 17 are amended hereby, and now-redundant dependent claim 4 is cancelled hereby, without prejudice. All amended independent claims recite routing new client service requests to another network access server (amended claim 1) and within the same hunt group as the busied-out-for-service access server (amended claims 5, 8, 13, 16 and 17). No new matter is added. (*See* specification, page 4, line 34-page 5, line 1; page 5, lines 4-7; lines 13-14; page 5, line 32-page 6, line 5; page 7, lines 26-29; page 9, lines 13-16; lines 27-28.)

Dependent claim 4 now recites the routing of new client service requests to another access server within the same hunt group as the access server that has been busied out for service. Dependent claim 9 now recites the "automatic" scheduling of service, as opposed to the manual scheduling of service recited in dependent claim 10. Other formal changes to certain claims are made to clarify antecedent bases for terms.

The proffered amendments should be entered because they place the application in condition for allowance, add no new matter, require no further prior art search (the Examiner's Official notice, which applicant traverses, comprehends the hunt group that is the subject of some of the amended claims), and require only brief review for allowance. The amendments should be entered in any event because they remove issues from, and thus place the application in better condition for, any necessary appeal.

Claim Rejections - 35 USC §103

Claims 1-4, 8-11 and 16-17 are rejected under 35 USC §103(a) as being unpatentable over U.S. Patent No. 5,933,490 to White et al., in view of Fratto, M., *More Than Throughput: Managed Modem Chassis,* Network Computing, Vol. 7, No. 17, pp. 1-5, Nov. 1966 ("Fratto I"), further in view of U.S. Patent No. 4,629,832 to Carson, et al. ("Carson"), U.S. Patent No. 4,629,832 and further in view of what the Examiner thinks other, un-cited prior art teaches. Claims 5-7 and 12-15 are rejected under 35 U.S.C. §103(a) as being unpatentable over White in view of Fratto and further in view of Carson, and further in view of Fratto, M. *Accessing the Enterprise: Large-Scale RAS to the Rescue,* Network Computing, pp. 1-8, April 1999 ("Fratto II"). Applicant traverses the rejections for the following reasons.

The Examiner concedes that White does not teach the method steps recited in the

body of claim 1. Nevertheless, the Examiner believes that Fratto I teaches an access server able to busy out all associated channels of a server when a system manager manually initiates preventive maintenance. The Examiner then concedes that Fratto I does not teach applicants busying-out steps of communicating, monitoring, communicating and signaling. Nevertheless, the Examiner believes that Carson teaches these steps. Thus, the Examiner believes the combination of the three references teaches the claimed invention. With regard to claims 4, 9 and 10, the Examiner resorts to taking "Official notice" of "fact[s]" for which there are apparently no prior art publications or sworn testimony of record.

Fratto I looks for only 1 of 3 possible incoming calls: 1) analog modem calls from the PC to the access server having a modem; 2) Digital calls made from PC with an ISDN TA through a digital BRI (Basic Rate Interface) line to the access server; and 3) VoIP calls to an access server carrying simple digitized voice communications. Fratto I's teachings thus are limited to only analog calls and offer no solution whatsoever to handling a digital ISDN call to an access server. Thus, there are at least two classes of client service requests that Fratto I's proposed solution *completely ignores*.

On the contrary, applicant's invention communicates a busy condition of any unused associated channel from the network access server to the service request switch and awaits a "substantially unused" condition of a used associated channel and communicates the substantially unused channel's 'busy' condition. Moreover, applicant's solution is comprehensive to handle service or maintenance of an access server while re-routing new client service requests to another, regardless of whether the incoming call is an analog modem call from a PC, a digital call into an ISP or a regular voice call from one central office to another through a network access server.

Finally, applicant's invention signals that maintenance may be performed. *Meanwhile, incoming client service requests are routed, in accordance with the claims, either automatically or manually, during such forced busy condition to another network access server coupled with the same service request switch (amended claim 1) and within the same hunt group (amended claims 5, 8, 13, 16 and 17).* By busying out the DS0's or so-called B channels on the access server, during the service or maintenance period, applicant's invention provides a comprehensive and sophisticated approach to maintenance without service interruption.

None of the known prior art, including White, Fratto I, Carson or Fratto II, suggests routing new client service requests during a channel busy condition or performance of

maintenance or service to another access server, whether within the same hunt group or another.

Indeed, the Examiner can cite no prior art teachings to such routing, whether manual or automatic, of new service requests during maintenance of a given access server to another access server, whether within the same or a different hunt group. The Examiner instead of citing such prior art teachings takes "Official notice ... of the fact that it is known in the art to allocate the channels of a hunt group across multiple access servers." The Examiner apparently further takes Official notice that "[i]n such a system, any new client service requests that may arrive during a busy condition of the network access server are automatically routed [to] another network access server operatively coupled with the service request switch." (*See* Office action at page 7, paragraph 13.)

Applicant hereby respectfully traverses the Official notice taken by the Examiner and request documentary proof of such prior art teachings. Accordingly, applicant also traverses the rejection of claims 4, 9 and 10 based upon the lack of a *prima facie* case of the obviousness of claims reciting a limitation to routing, whether manual or automatic, of new client service requests during a busy condition of associated channels of a given access server to another access server, *whether within the same hunt group or another.*

Carson teaches central office--not access server—administration—not maintenance. Furthermore, Carson teaches busying out "*all* CO lines" after "*all* stations" are idle, and then proceeding with pool-wide line re/assignments (Fig. 5). Moreover, as previously stated, Carson teaches nothing about monitoring substantial use or non-use, but instead only teaches determining whether a channel is *in use or not*. Thus, Carson teaches nothing about routing client service requests during maintenance of a given access server to another access server, whether within the same hunt group or another, upon a determination that a once-used channel has become "substantially unused."

White and Fratto II contain no teachings about routing calls around a given access server to another during service or maintenance of the given access server.

Applicant submits that all pending claims, as amended to more distinctly claim the invention, are allowable over the prior art.

Accordingly, applicant requests entry of the amendments and allowance of the application. If further questions remain, please contact the undersigned.
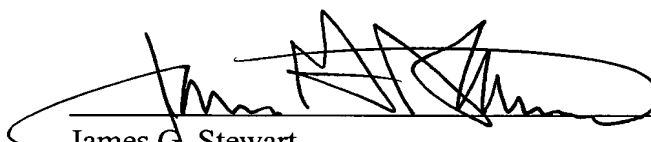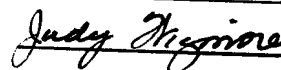
Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Claims

1.   (Amended) A method of performing maintenance on a network access server having associated channels, the network access server being operatively coupled with a service request switch, the method comprising:

determining whether off-line maintenance is needed on a network access server and if so then communicating a busy condition of any unused associated channel from the network access server to the service request switch;

monitoring any used associated channel and waiting until the used associated channel becomes substantially unused;

when the used associated channel becomes substantially unused, communicating a busy condition of such then-unused channel from the network access server to the service request switch; [and]

signaling that maintenance on the network access server can be performed; and automatically routing any new client service requests that may arrive during a busy condition of the network access server to another network access server operatively coupled with the service request switch.

4.   (Amended) The method of claim1 [which further comprises automatically routing any new client service requests that may arrive during a busy condition of the network access server to another network access server operatively coupled with the service request switch] in which the network access server is within a given hunt group, wherein said automatic routing is targeted to another network access server within the given hunt group.

5.   (Amended) Apparatus for performing maintenance on a given network access server within a given hunt group, the network access server being operatively coupled with a telephone company (telco) switch, the apparatus comprising:

a scheduler for scheduling off-line maintenance for a given network access server;

a channel usage monitor responsive to said scheduler for monitoring usage of the associated channels of the given network access server; [and]

a make-busy mechanism responsive to said channel usage monitor and coupled with the telco switch for signaling the telco switch that all channels are busy,

whereby maintenance is performed on the given network access server after said

signaling and upon a determination by said channel usage monitor that no channel is currently in use; and

~~automatically routing any new client service requests that may arrive during a busy condition of the network access server to another network access server operatively coupled with the service request switch and within the given hunt group~~.

8.   (Amended) A method of temporarily taking offline for service a given network access server ~~within a given hunt group, the given network access server~~ having plural associated channels, the network access server being operatively coupled with a network service request switch, the method comprising:

busying out any unused channels of the given access server and communicating a busy condition thereof to the service request switch;

monitoring any used associated channel;

during said monitoring, awaiting substantial non-use of any remaining associated channels of the given access server and thereafter communicating a busy condition thereof to the service request switch;

signaling that service to the given access server can be performed;

~~routing any new client service requests that may arrive during a busy condition of the given network access server to another network access server operatively coupled with the service request switch and within the given hunt group;~~ and after such service is completed

communicating a substantially idle condition of the associated channels to the service request switch.

9.   (Amended) The method of claim 8 which further comprises [auto-routing any new client service requests that may arrive during said performing of the service to an other access server operatively coupled with the service request switch] ~~scheduling the service automatically by command to the given access server~~.

10.   (Cancelled)

13.   (Amended) A computer-readable medium containing a program for taking an active network access server, within a given hunt group, off line for maintenance, the active network access server being operatively coupled with a telephone company (telco) switch, the program comprising:

a maintenance scheduler for scheduling off-line maintenance for [a given] the active network access server;

a channel usage monitor responsive to said scheduler for monitoring usage of the associated channels of the [given] active network access server; [and]

a make-busy mechanism responsive to said scheduler and to said channel usage monitor and coupled with the telco switch for signaling the telco switch that all channels associated with the active network access server are busy,

whereby maintenance is performed on the [given] active network access server after such signaling and upon a determination by said channel usage monitor that no channel associated with the active network access server is currently in use; and

automatically routing any new client service requests that may arrive during a busy condition of the active network access server to another network access server operatively coupled with the service request switch and within the given hunt group.

14.   (Amended) The program of claim 13 wherein such signaling by said make-busy mechanism is performed via a standard communication protocol between the active network access server and the telco switch, the standard protocol normally communicating a busy/idle condition of any associated channel of the active network access server to the telco switch.

16.   (Amended) A computer-readable medium containing a program for performing maintenance on a network access server within a given hunt group, the network access server having associated channels, the network access server being operatively coupled with a service request switch, the program comprising:

instructions determining whether off-line maintenance is needed on [a] the network access server;

instructions communicating a busy condition of any associated channel from the network access server to the service request switch;

instructions monitoring any used associated channel and waiting until the used

associated channel becomes substantially unused;

instructions, operative when the used associated channel becomes substantially unused, communicating a busy condition of such then-unused channel from the network access server to the service request switch; [and]

instructions signaling the network access server that maintenance can be performed[,]; and

instructions automatically routing any new client service requests that may arrive during a busy condition of the network access server to another network access server operatively coupled with the service request switch and within the given hunt group,

said communicating, said monitoring-and-waiting, said communicating, [and] said signaling and said routing instructions being executed selectively upon a determination that off-line maintenance is needed.

17.   (Amended) A computer-readable medium containing a program for temporarily taking offline for service a given network access server within a given hunt group, the given network access server having plural associated channels, the given network access server being operatively coupled with a network service request switch, the program comprising:

instructions busying out any substantially unused channels of the given network access server and communicating a busy condition thereof to the service request switch;

instructions monitoring any used associated channel;

instructions awaiting termination of substantial use of any remaining associated channels of the given network access server and thereafter communicating a busy condition thereof to the service request switch;

instructions signaling that service to the given network access server can be performed[,];

instructions automatically routing any new client service requests that may arrive during a busy condition of the given network access server to another network access server operatively coupled with the service request switch and within the given hunt group; and

instructions communicating a substantially idle condition of the associated channels to the service request switch, said communicating instructions being executed selectively upon a determination that such service has been completed.